

FIG. 1

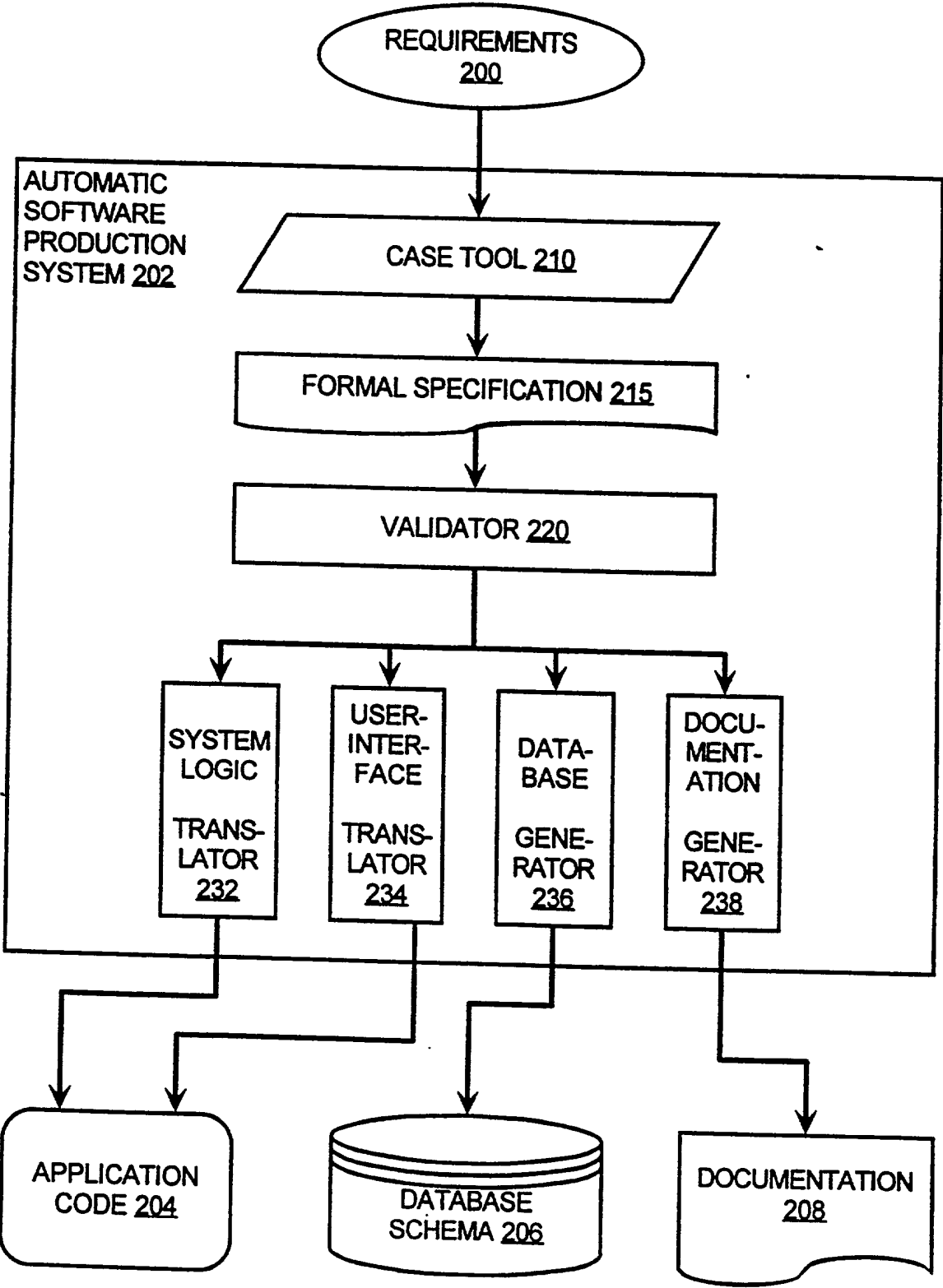


FIG. 2

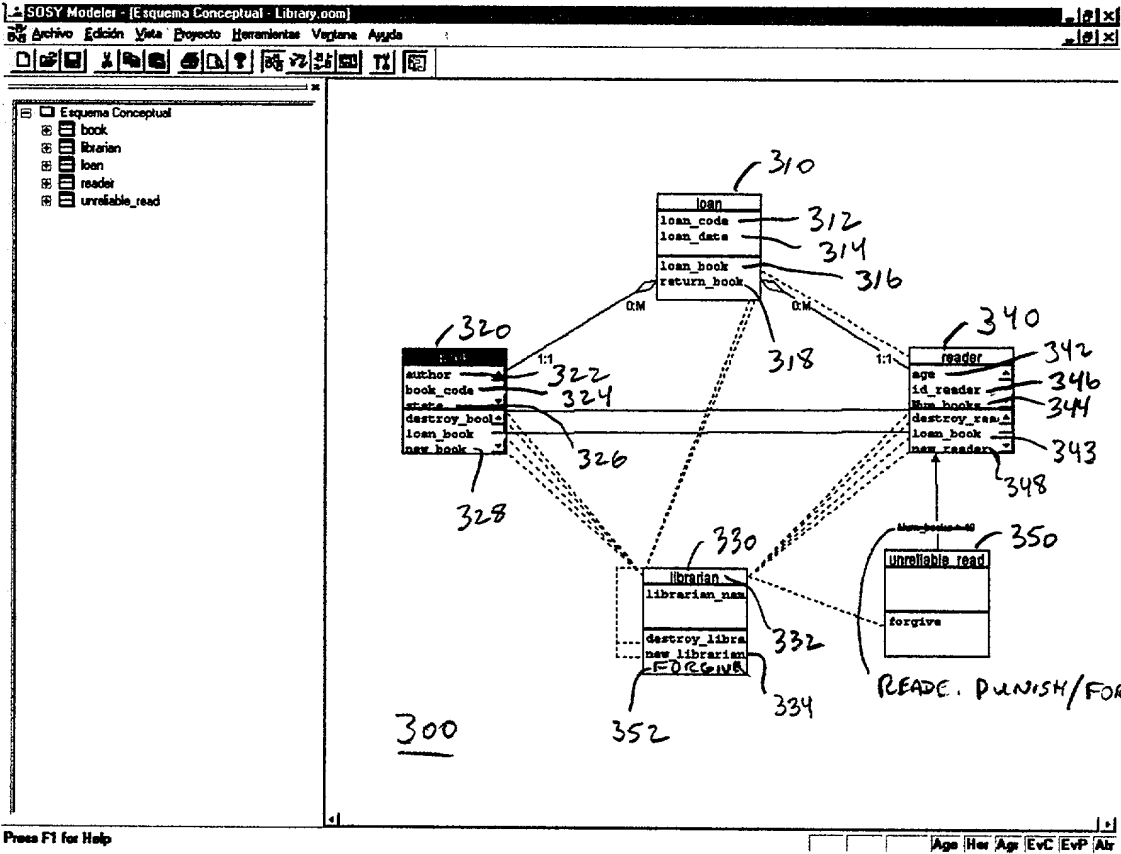


FIG. 3

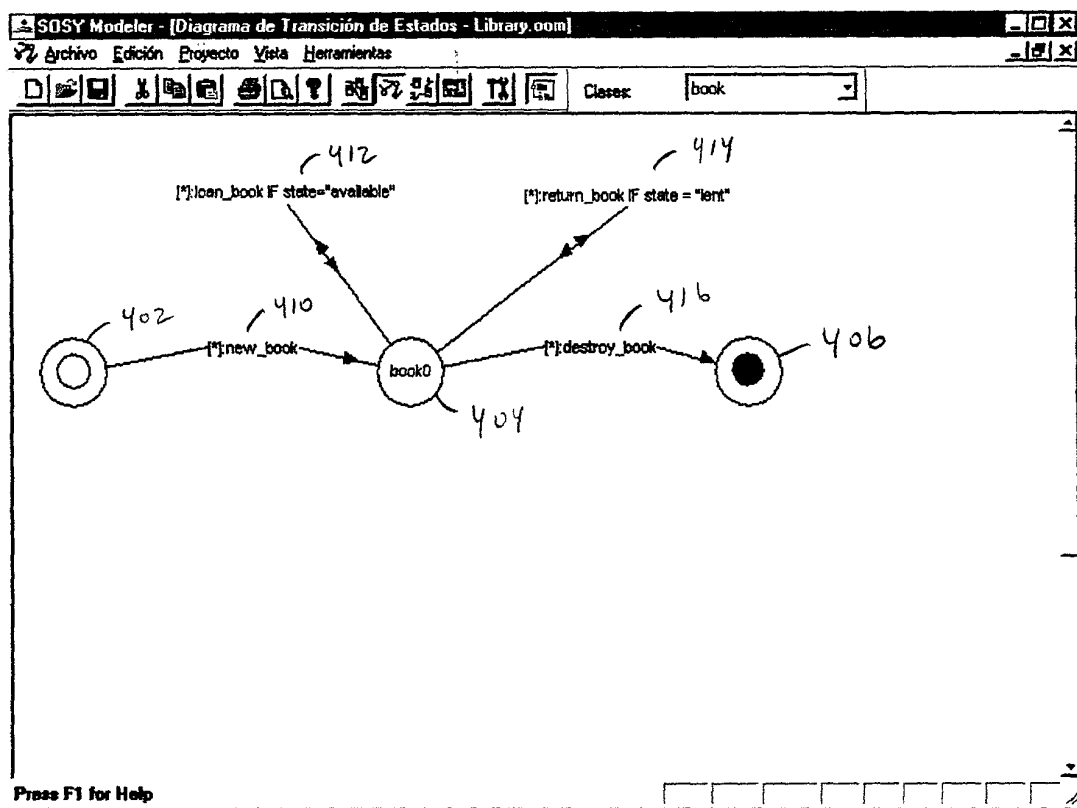


FIG. 4A

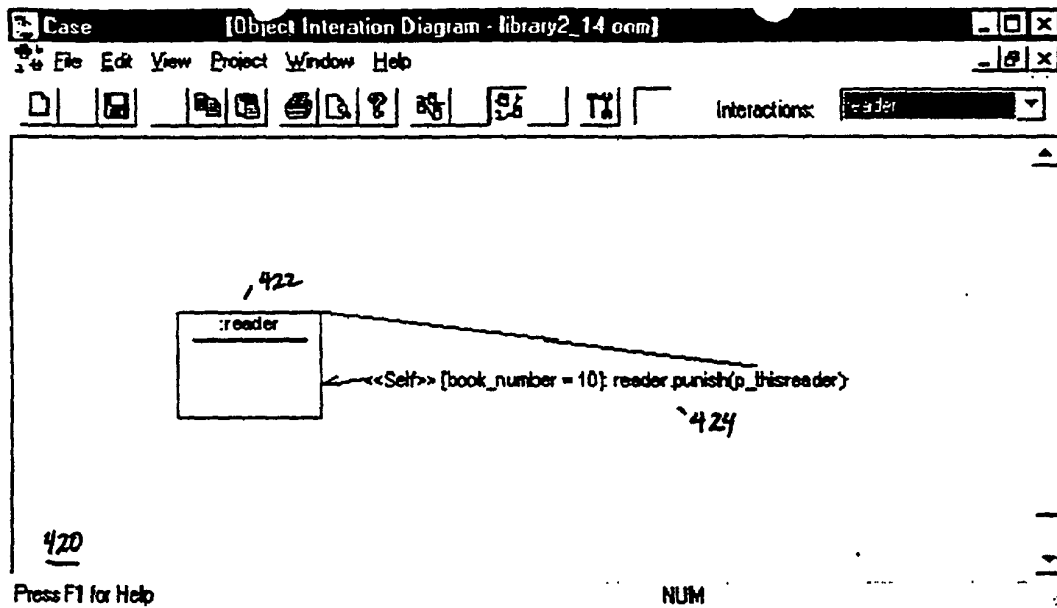


FIG. 4B

Functional Model

Object: reader Attribute: book_number

Cancel

Event	Effect	Condition
loan_book	1	
return_book	1	

Add Modify Delete

Category

☒ Pushdown ☐ State-independent ☐ Discrete-domain

Valuation Details

Event: loan_book Action type: Increment

Valuation condition:

Effect of the event:

1

FIG. 5

2025 RELEASE UNDER E.O. 14176

FLOWCHART OF THE FUNCTIONS THAT ALL SPECIES OF SYSTEM LOGIC TRANSLATORS WILL PERFORM

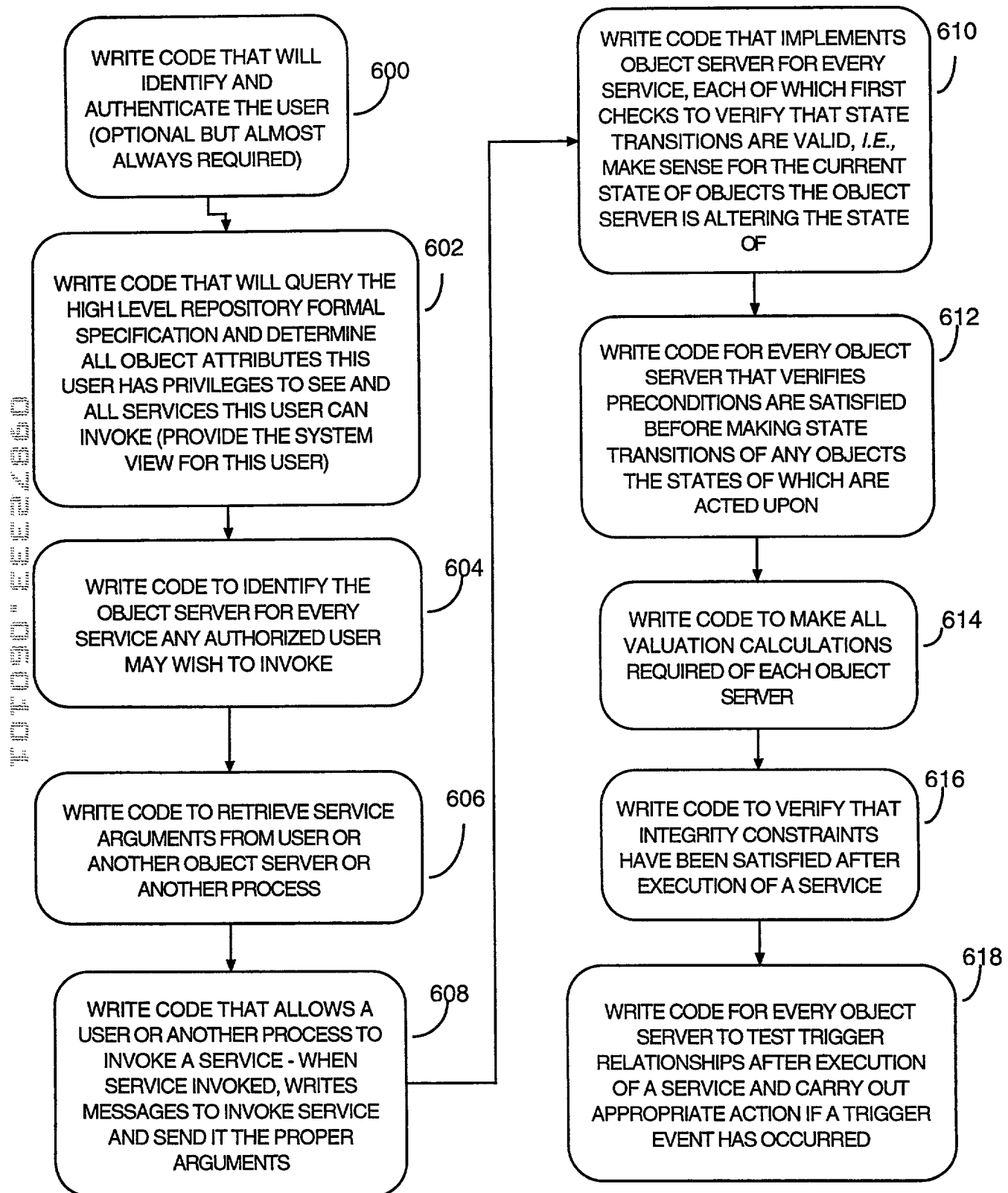


FIG. 6

FLOWCHART OF THE FUNCTIONS THAT ALL SPECIES IN THE USER INTERFACE
TRANSLATOR SUBGENUS WILL PERFORM

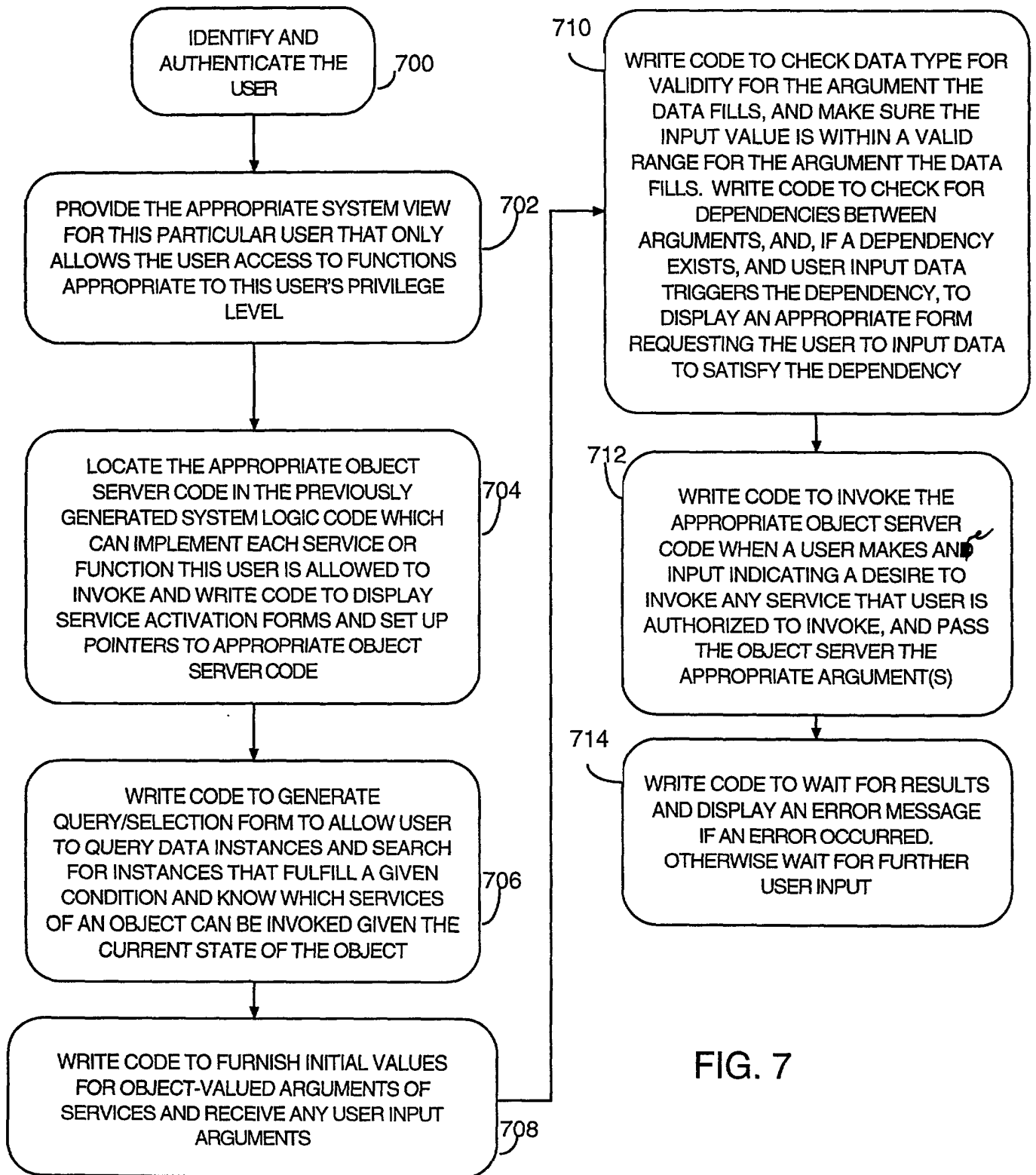


FIG. 7

FLOWCHART OF THE FUNCTIONS THAT ALL SPECIES IN THE DATABASE GENERATOR
TRANSLATOR SUBGENUS WILL PERFORM

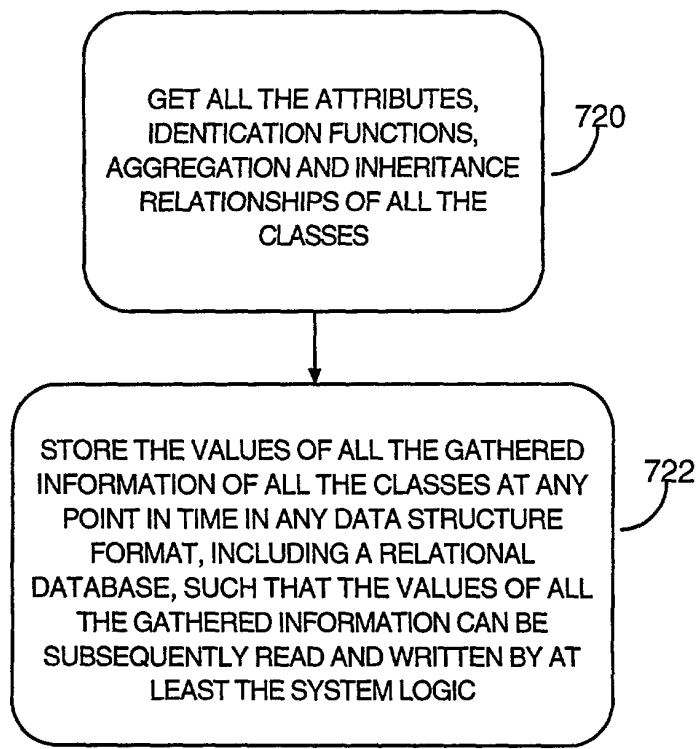
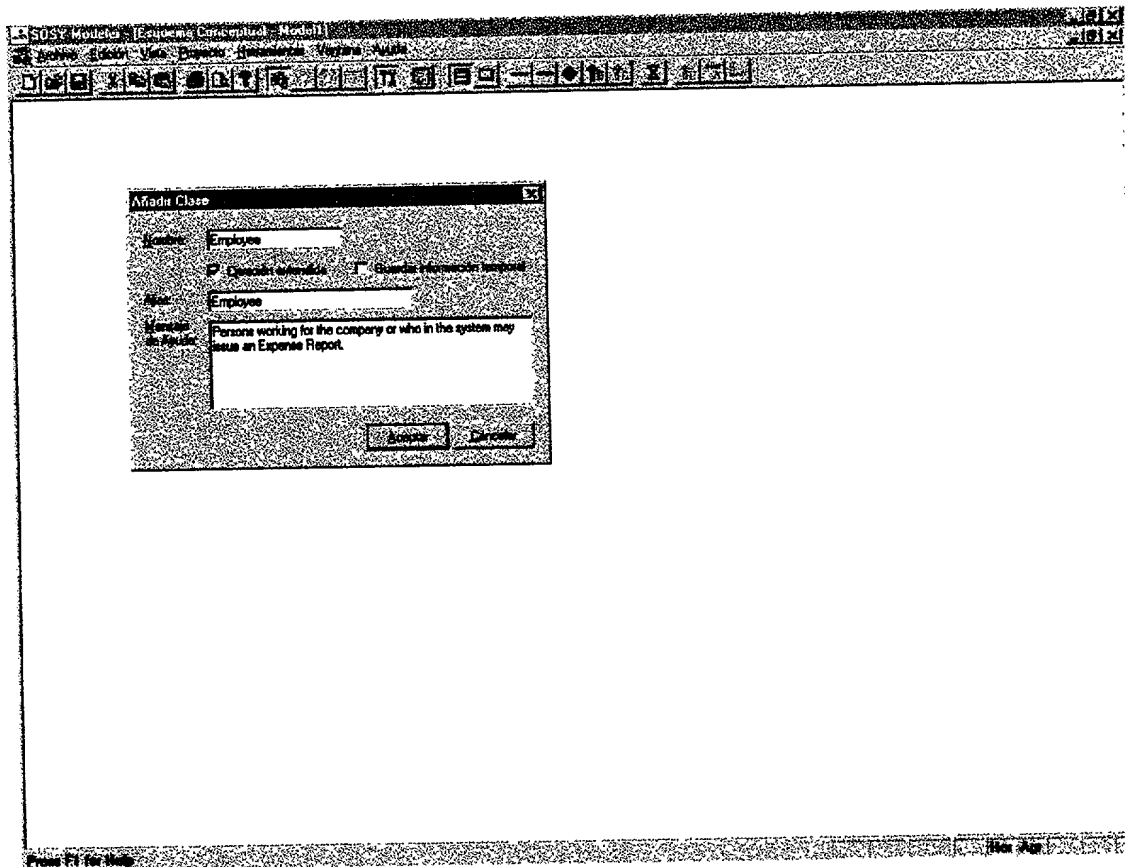


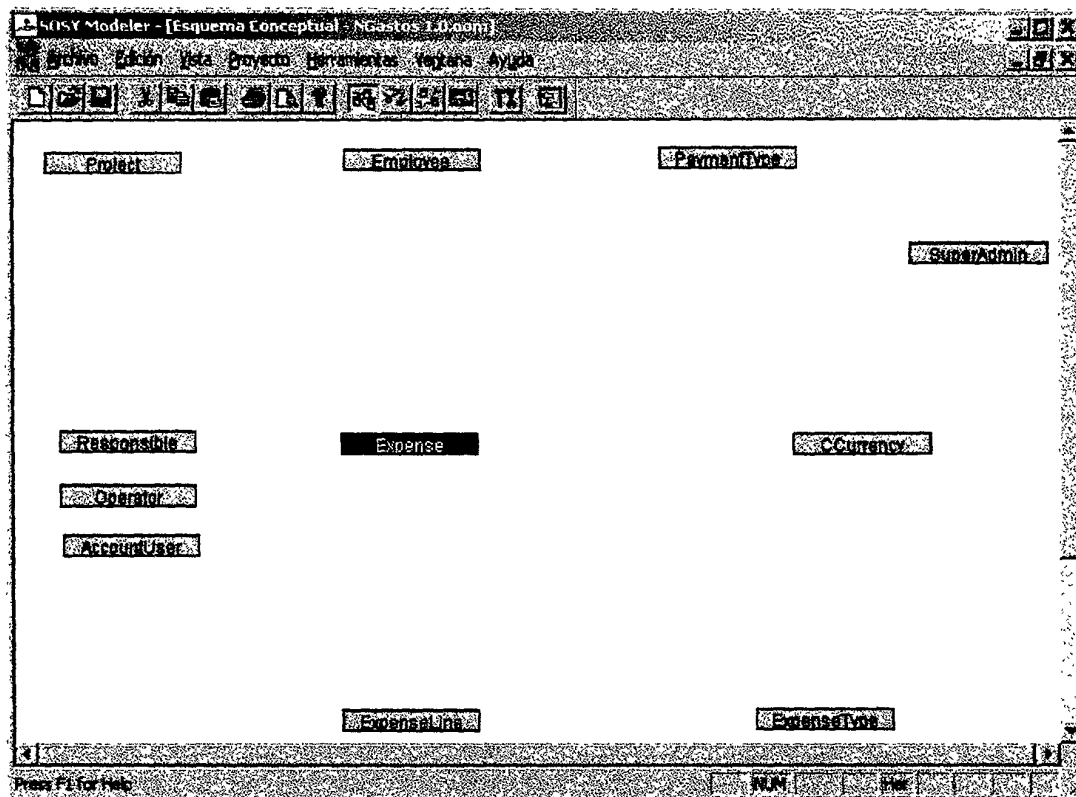
FIG. 8



class creation dialog

FIG. 9A

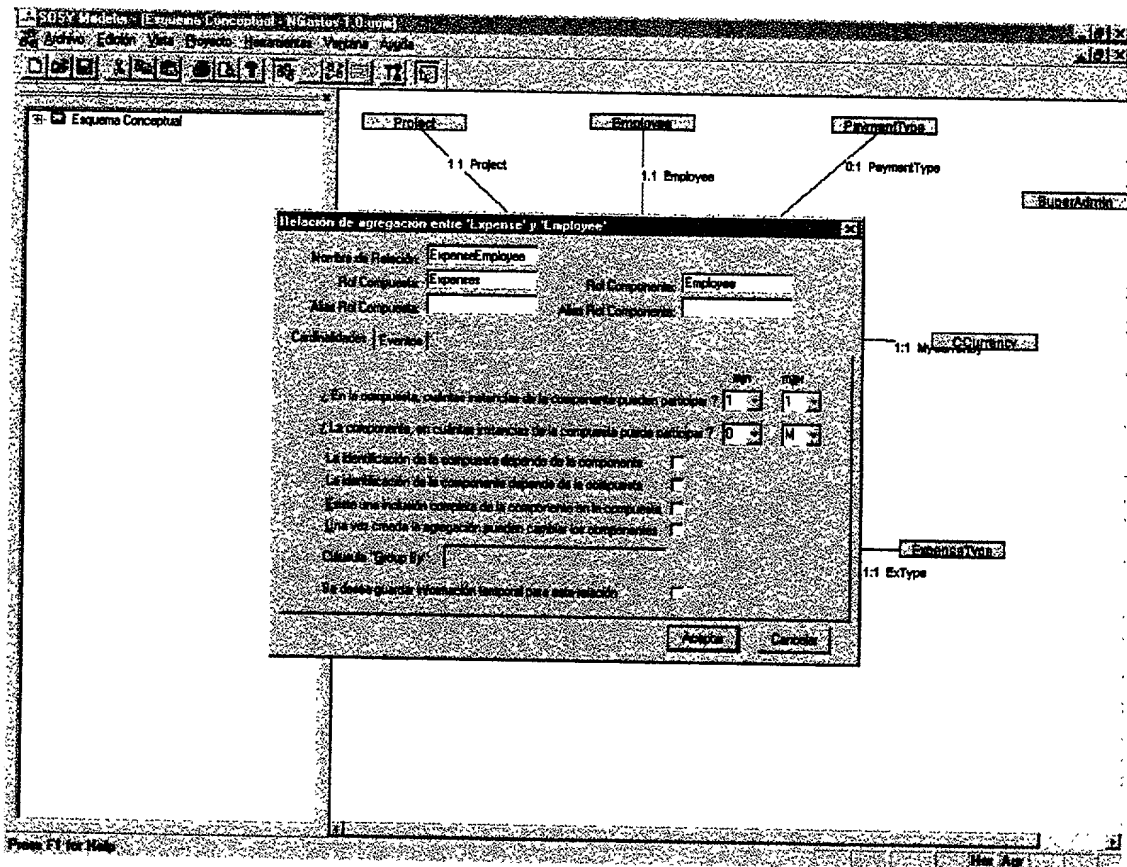
09872333-060101



DIALOG SHOWING ALL CLASSES NEEDED & CREATED
IN EXPENSE MANAGEMENT SYSTEM

FIG. 9B

101030-001-001

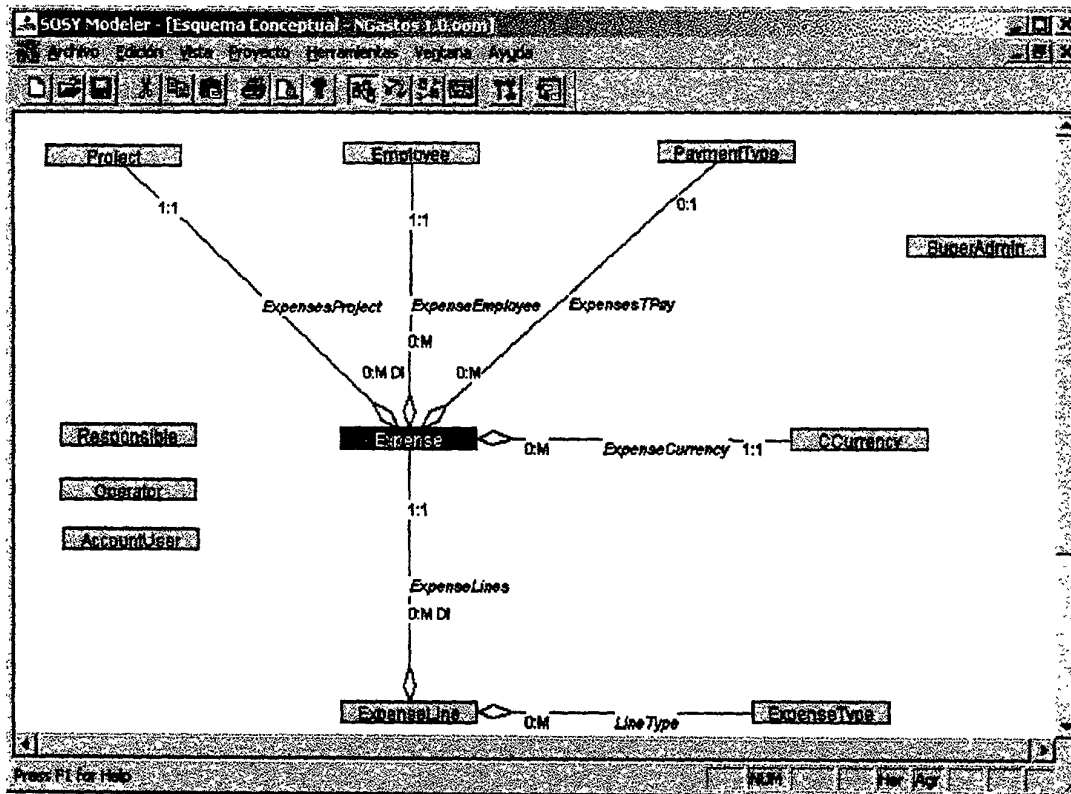


dialog to create and modify relationships between classes

FIG. 90

09872333-060101

figure shows relationships found with all their properties indicated.



GRAPHIC DIALOG TO CREATE
RELATIONSHIPS BETWEEN CLASSES
AND GRAPHICALLY SHOW THE
RELATIONSHIPS SO CREATED

FIG. 10

20250327 14:35:00

093727-0000

Clase

Atributos | Servicios | Derivaciones | Restricciones | Agentes | Transacciones | Relaciones | Generalidades

Atributos

Nombre	Tipo atributo	Tipo dato	Id	Tamaño	Valor defecto	Pedir al crear	Nulos	
PresentDate	Constante	Date			today()	Sí	No	
Status	Variable	Int			0	No	No	
Cause	Variable	String		255		Sí	No	
AuthoDate	Variable	Date			NULL	No	Sí	
AuthoComments	Variable	String		255	NULL	No	Sí	
PaymentDate	Variable	Date			NULL	No	Sí	
PayComments	Variable	String		255		No	Sí	
TotExpenses	Derivado	Real						
TotExpensesCur	Derivado	Real						
Advances	Variable	Real			0	Sí	No	
AdvancesCur	Derivado	Real						
Exchange	Variable	Real				No	Sí	
Balance	Derivado	Real						
BalanceCur	Derivado	Real						

Nombre: Tipo Atributo: Tipo Dato:

☐ Información Temporal

Alias:

Observaciones:

Clase:

Aceptar Cancelar

(A)

Clase

Atributos | Servicios | Derivaciones | Restricciones | Agentes | Transacciones | Relaciones | Generalidades

Atributo:

Fórmulas de Derivación

Condición	Fórmula	
	TotExpenses - Advances	

Condición:

Fórmula:

Observaciones:

Clase:

Aceptar Cancelar

(B)

FIG. 11

20250422 09:04

Clase

Alquileres Servicios Desempeños Reservas Agencias Transacciones Relaciones Generalidades

Eventos y Transacciones

Nombre	Categoría
newexpense	New
deleteexpense	Destroy
modify	
close	
authorize	
approve	
pay	
rejectauth	
rejectpayment	
linePaymentType	Shared with PaymentType
forPaymentType	Shared with PaymentType
DELETEALL	Tran
TPAY	Tran

Modificar

Eliminar

Copiar

Imprimir

Notas >>

Permisos

Nombre	Tipos de datos
is thisExpense	Expense
is Cause	String
is Advances	Real
is Exchange	Real

Modificar

Eliminar

Notas >>

Modificar

Eliminar

Notas >>

Nombre

Tipos de datos

Fecha

Nombre

Eliminar

Valor por defecto

Observaciones

Observaciones

Clase: Expense

Aceptar Cancelar

SERVICIOS DE CLASE "EXPENSE"
FIG. 12

[illegible]

Clase

Atributos | Servicios | Derivaciones | Restricciones | Agentes | Transacciones | Relaciones | Generalidades

Transacción: DELETEALL

Fórmula:

```
FOR ALL Lines DO Lines.deleteLine( Lines ). deleteExpense( THIS )
```

Detalle

Clase/Obj.: Expense

Agente:

Servicio: approve

Parámetro: P_thisExpense

Inicial:

☐ Crear Parámetro en la Transacción

Observaciones:

Clase: Expense

Aceptar Cancelar

DIALOG TO DEFINE FORMULA FOR "DELETEALL"
TRANSACTION
FIG. 13

Clase:

Atributos	Servicios	Derivaciones	Restricciones	Agentes	Transacciones	Relaciones	Generalizadores
-----------	-----------	--------------	---------------	---------	---------------	------------	-----------------

Exchanges

Exchange : 0		Añadir
		Modificar
		Borrar
1	5	Heredadas

Fórmula: Exchange > 0

Message De Error: Exchange must be greater than zero

FIG. 14

The value of the attribute "Cause" will be loaded with the value of the argument "p_Cause" of the event "modify" when "modify" was executed.

The screenshot shows a software interface titled "Modelo Funcional". At the top, there are two dropdown menus: "Clase" (Class) set to "Expense" and "Atributo" (Attribute) set to "Cause". To the right of these are "Aceptar" (Accept) and "Cancelar" (Cancel) buttons. Below this is a table with three columns: "Evento" (Event), "Efecto" (Effect), and "Condición" (Condition). The first row shows "modify" in the "Evento" column, "=" in the "Efecto" column, and "p_Cause" in the "Condición" column. To the right of the table are buttons for "Añadir" (Add), "Modificar" (Modify), and "Borrar" (Delete). Below the table is a "Categoría" (Category) section with three radio buttons: "Cardinal", "De Estado" (selected), and "De Situación". At the bottom is a "Detalles de Evaluación" (Evaluation Details) section. It contains an "Evento" dropdown set to "modify", a checkbox "Inferir para el resto de atributos" (Infer for the rest of attributes) which is unchecked, a "Condición de evaluación" (Evaluation condition) field with the handwritten value "724", an "IF:" label, an "Efecto del evento" (Event effect) field with the handwritten value "726", and a text input field containing "p_Cause".

DIALOG BOX TO CREATE EVALUATION OF
"CAUSE" ATTRIBUTE WITH THE
"MODIFY" EVENT TO FORM PART OF
FUNCTIONAL MODEL
FIG. 15

Clase

Clase servidora:

Servicios:

Servicio
newexpense
modify
close
authorize
rejectauth
DELETEALL

Clase AccountUser agente de:

Servicio	Temporalidad
Expense.approve	No
Expense.rejectpayment	No
Expense.TPAY	No

Clase AccountUser tiene visibilidad sobre:

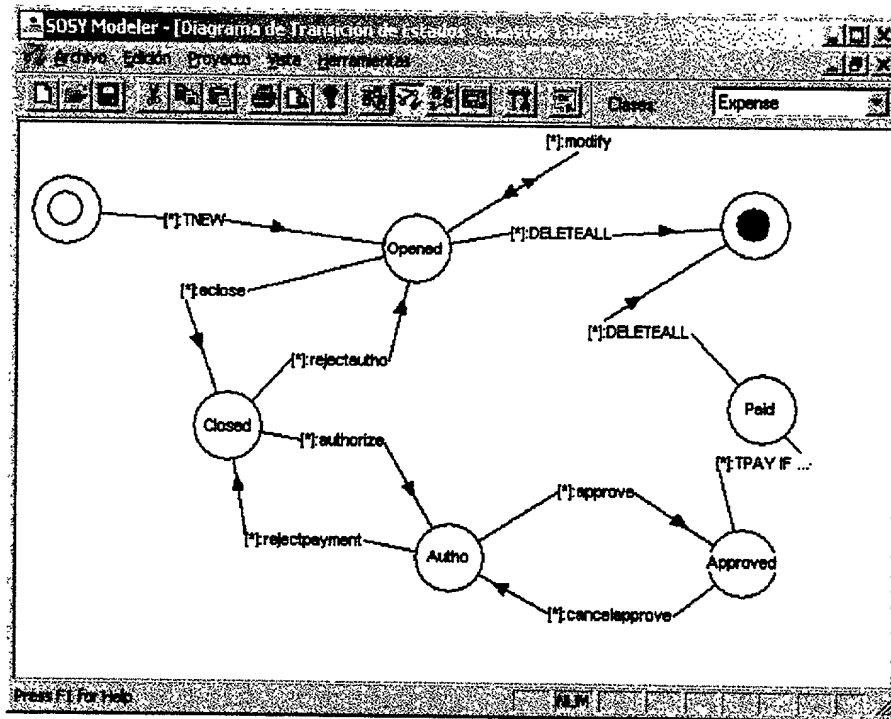
Atributos:

Atributos
Cause
AuthComments

Clase:

AGENT RELATIONSHIP DIALOG THAT CAN BE
USED TO SET WHICH SERVICES "ACCOUNTUSER"
CAN ACCESS AND VISIBILITY OF CLASS
ATTRIBUTES FOR THIS USER

FIG. 16



STATE TRANSITION DIAGRAM FOR CLASS "EXPENSE"

FIG. 17

According to last paragraph of Procedure, if the Advances are greater than total expenses, the system must force the confirmation of the account user. It is expressed as a precondition in the "TPAY" transaction. Next figure shows it.

The image shows a software window titled "Transición" (Transition). It contains several fields and buttons:

- Origen** (Origin): A dropdown menu with "Approved" selected.
- Destino** (Destination): A dropdown menu with "Paid" selected.
- Buttons**: "Aceptar" (Accept) and "Cancelar" (Cancel) are located in the top right corner.
- Detalles** (Details): A section on the left containing a list box with "AccountUser" and "SuperAdmin".
- Servicio** (Service): A dropdown menu with "TPAY" selected.
- Precondición** (Precondition): A text area containing the logical expression "Balance > 0 OR ps_ReturnAdvance = TRUE".
- Condición de control** (Control condition): An empty text area.
- Mensaje en caso de Error** (Message in case of error): A text area containing the text "Check the advanced money excess".

DIALOG BOX TO MODEL PRECONDITION

FIG. 18

Conjunto de Visualización

Nombre: CV_Expense Limpia Borrar

Atributos a visualizar:

Atributo	Tipo dato
Project.ProjectName	String
Employee.EmpName	String
Employee.EmpSur...	String
Status	Int
AuthoDate	Date
PaymentDate	Date
TotExpenses	Real
Balance	Real

<< Añadir
Eliminar >>
Subir
Bajar
Agregar

Atributos:

Atributo	Tipo dato
Cause	String
AuthoDate	Date
AuthoComments	String
PaymentDate	Date
PayComments	String
TotExpenses	Real
TotExpensesCur	Real
Advances	Real
AdvancesCur	Real
Exchange	Real
Balance	Real
BalanceCur	Real

Clase: Expense Aceptar Cancelar

DIALOG BOX USED BY SOSY MODELER
TO ESTABLISH A SET OF ATTRIBUTES
TO BE DISPLAYED FOR THE "EXPENSE" CLASS

FIG. 19

Filtro

Filtro: Alias:

Fórmula: << Variable

Observ.:

Variables

Nombre	Alias	Tipo dato	Tipo estilo	Estilo	
vf_Project	Project	Project	Sel. Población		<input type="button" value="Nueva"/> <input type="button" value="Modificar"/> <input type="button" value="Borrar"/>
vf_Employee	Employee	Employee	Sel. Población		
vf_DateIniIssue	Initial Issuing Date	Date			
vf_DateEndIssue	Final Issuing Date	Date			
vf_DateIniApp	Initial Approving D...	Date			

Tipo: ☒ Simple ☐ Objeto-valorado

Nombre: Estilo de introd.:

Alias: Estilo de selección:

Tipo de dato:

Clase:

DIALOG BOX USED BY SOSY MODELER
TO ESTABLISH THE SEARCHING CRITERIA
FOR THE EXPENSE CLASS AND TO ESTABLISH
THE FILTER FORMULA ^{TO USE} AND THE VARIABLES
TO REQUEST THE USER TO ENTER

FIG. 20

FLOWCHART OF THE FUNCTIONS THAT ALL SPECIES IN THE DOCUMENTATION
GENERATOR TRANSLATOR SUBGENUS WILL PERFORM

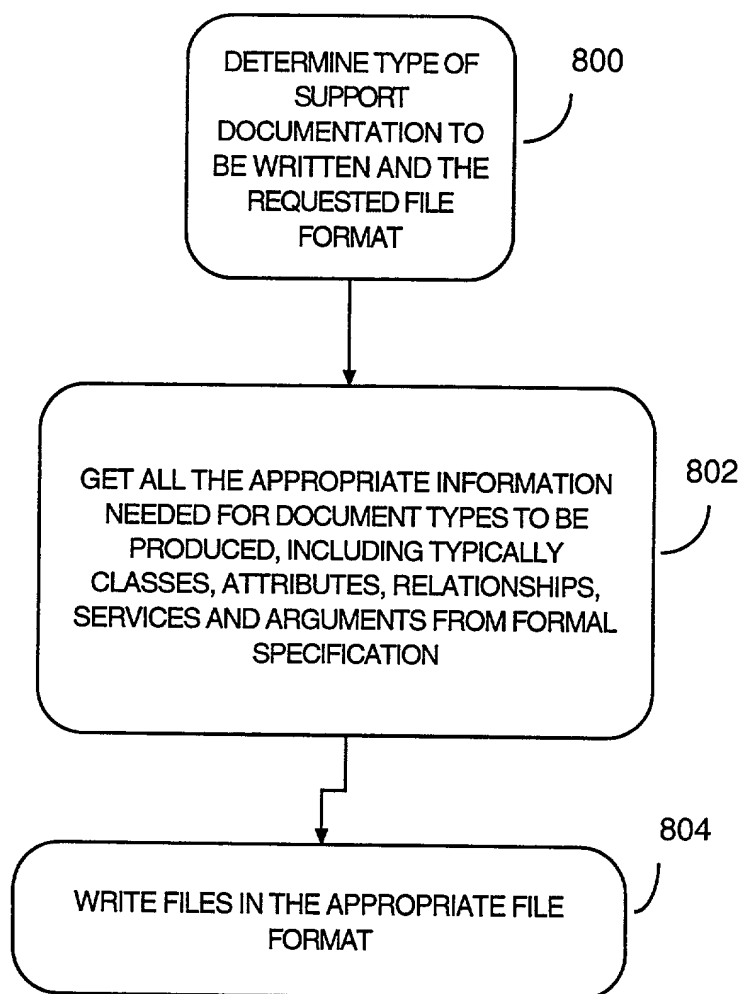


FIG. 21